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**In the claims:**

All claims standing for examination are presented below with appropriate status indication

1-37. (Cancelled)

38. (New) A method for transferring a packet of data across connected networks, comprising the steps of:

(a) at a first node in a virtual private network (VPN), using a first header portion of a data packet, the first header portion indicating the first node as a source node and a second node in the VPN as a destination node, generating a value associated with the source and destination nodes;

(b) creating a second header portion for the data packet including the value associated with the source and destination nodes;

(c) using the second header portion, selecting one of a plurality of possible paths on a second network connected to the VPN for forwarding the packet.

39. (New) The method of claim 38 wherein the second network is the Internet network.

40. (New) The method of claim 38 wherein the first header portion is one or the other of an Ethernet header portion or an Internet Protocol (IP) header portion, and the second header portion is one or the other of an Ethernet header portion or an Internet Protocol (IP) header portion.

41. (New) The method of claim 38 wherein the value is derived by performing a hash operation on the first header portion.

42. (New) The method of claim 41 wherein the hash operation is performed on

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information in the first header portion related to addresses of the source and destination nodes.

43. (New) The method of claim 41 wherein the hash operation is performed on a protocol field in the first header portion.

44. (New) The method of claim 41 wherein the hash operation is performed on IP source and destination addresses of the source and destination nodes, respectively.

45. (New) The method of claim 41 wherein the hash operation comprises performing a division on the first header portion.

46. (New) The method of claim 45 wherein the value is related to a remainder generated by the division.

47. (New) The method of claim 41 wherein the hash operation comprises a cyclic redundancy check.

48. (New) The method of claim 41 wherein the hash operation comprises a checksum operation.

49. (New) The method of claim 38 wherein the selecting step comprises performing a hash operation on the second header portion.

50. (New) A system for transferring a packet of data across connected networks, comprising:

    a first and a second node in a virtual private network (VPN), each node coupled to a second network; and  
    a data packet;

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wherein the first node generates, using a first header portion of the data packet, a value associated with the first node as a source node and the second node as a destination node, creates a second header portion for the data packet including the value generated from the first header portion, and using the second header portion selects one of a plurality of possible paths through the second network for routing the data packet to the second node in the VPN.

51. (New) The system of claim 50 wherein the second network is the Internet network.

52. (New) The system of claim 50 wherein the first header portion is one or the other of an Ethernet header portion or an Internet Protocol (IP) header portion, and the second header portion is one or the other of an Ethernet header portion or an Internet Protocol (IP) header portion.

53. (New) The system of claim 50 wherein the value is derived by performing a hash operation on the first header portion.

54. (New) The system of claim 53 wherein the hash operation is performed on information in the first header portion related to addresses of the source and destination nodes.

55. (New) The system of claim 53 wherein the hash operation is performed on a protocol field in the first header portion.

56. (New) The system of claim 53 wherein the hash operation is performed on IP source and destination addresses of the source and destination nodes, respectively.

57. (New) The system of claim 53 wherein the hash operation comprises performing a division on the first header portion.

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58. (New) The system of claim 57 wherein the value is related to a remainder generated by the division.

59. (New) The system of claim 53 wherein the hash operation comprises a cyclic redundancy check.

60. (New) The system of claim 53 wherein the hash operation comprises a checksum operation.

61. (New) The system of claim 50 wherein the selecting step comprises performing a hash operation on the second header portion.